Research & Development

U.S Army Engineer Research & Development Center

Cold Regions Research and Engineering Laboratory
Hanover, NH

Construction Engineering Research Laboratory
Champaign, IL

Topographic Engineering Center
Alexandria, VA

HQ, Engineer R&D Center

Coastal and Hydraulics Laboratory
Environmental Laboratory
Geotechnical & Structures Laboratory
Information Technology Laboratory
Vicksburg, MS

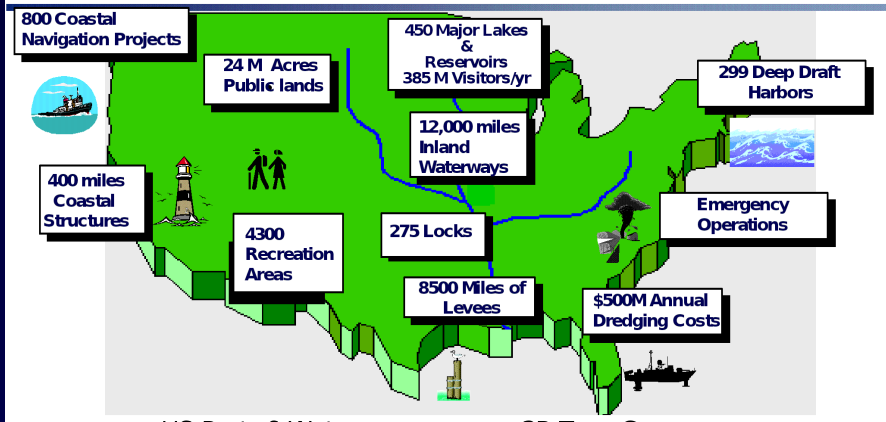
Scope of R&D

Support the Army in Garrison

78,029 Paved Miles
11.8 Million acres used for training
Over 400 Boiler Plants
size = NJ , CT, DE & RI 12.1 Million Acres
1.1 Billion Square Feet (40 square miles under one roof)
13,000 Sites require cleanup at a cost of $26 Billion.

Over 150 large installations worldwide
Approximately 40% of DoD
Replacement Value: $168.5 billion

Support to the Nation's Prosperity & Security


800 Coastal Navigation Projects
24 M Acres Public lands
450 Major Lakes & Reservoirs 385 M Visitors/yr
299 Deep Draft Harbors
12,000 miles Inland Waterways
400 miles Coastal Structures
4300 Recreation Areas
275 Locks
Emergency Operations
8500 Miles of Levees
$500M Annual Dredging Costs

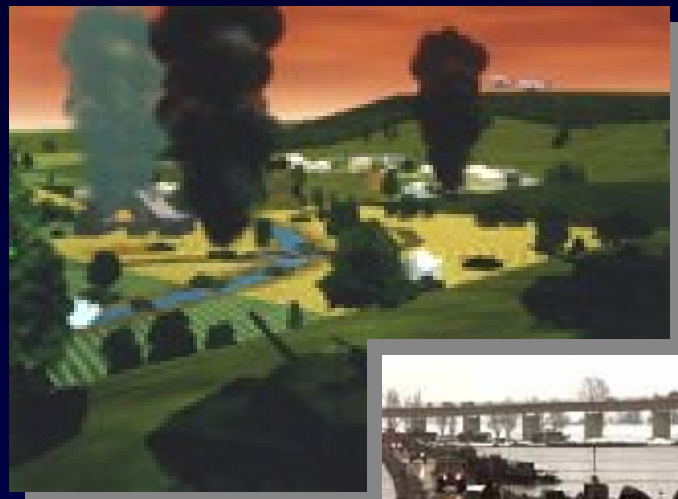
- US Ports & Waterways convey >2B Tons Commerce
- Foreign Trade alone Creates >$160B Tax Revenues
- Cumulative Flood Damage Prevention >$290B

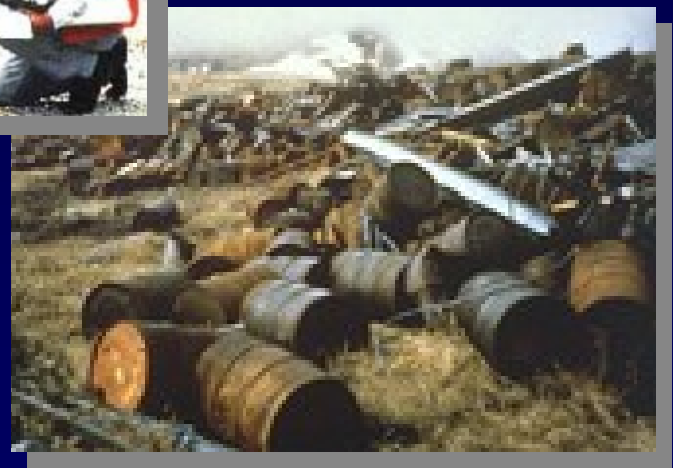
Support to the Army in Theater

- Force Projection Increases Criticality of Engineer Mission
- Technologies Facilitate Peace Keeping and Contingency Operations

ERDC Research Areas

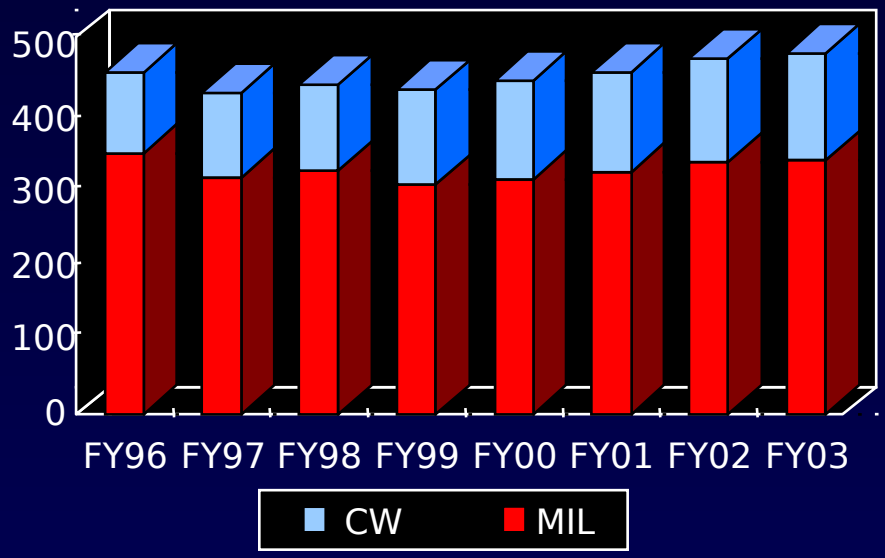
- Military Engineering
  - Mobility, Survivability, & Logistics
  - Topography
- Installations
  - Infrastructure
  - Environmental Quality
- Civil Works
  - Infrastructure
  - Environment
  - Operations



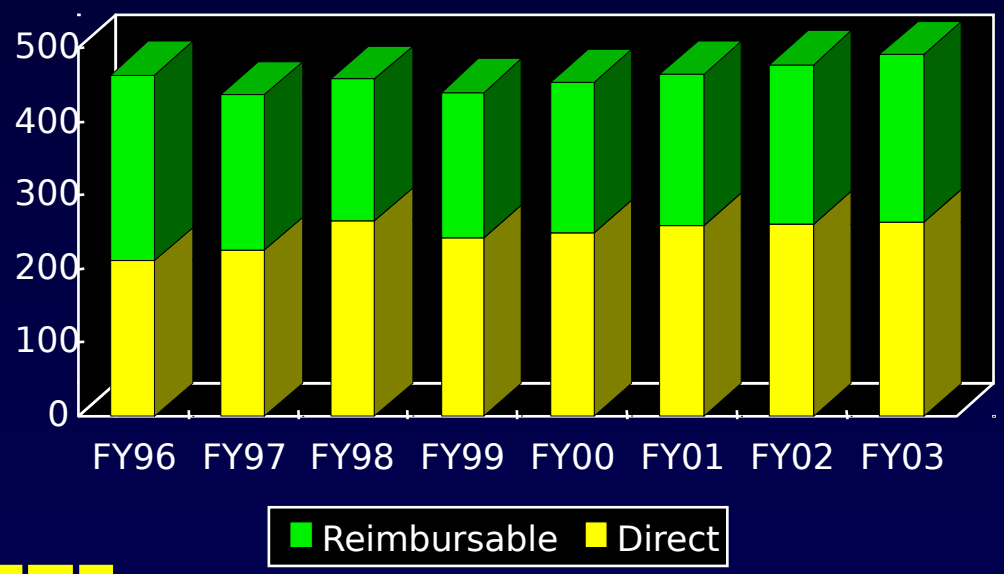


Resources

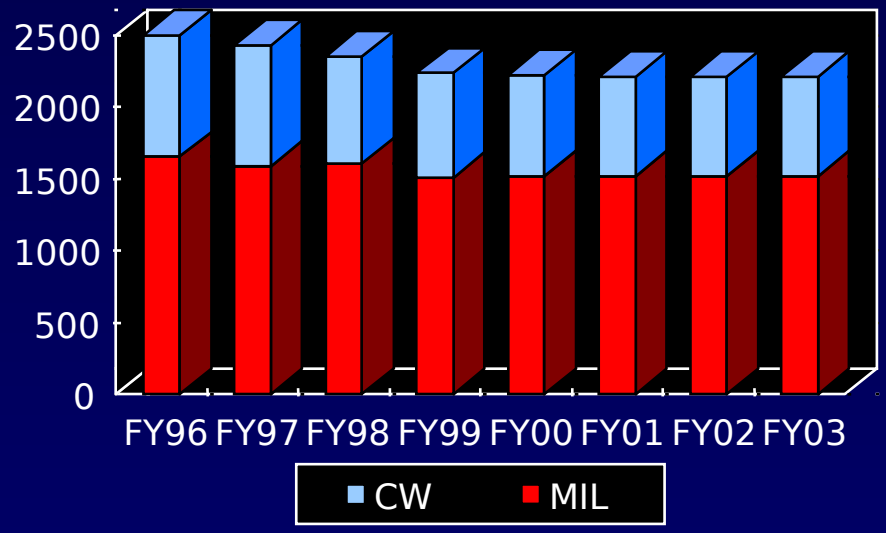
Funding ($ M)



Funding ($ M)



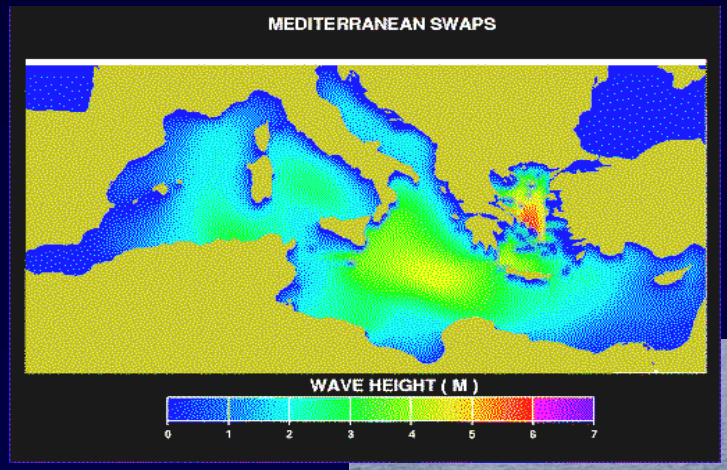
FTE



Microsoft PowerPoint Presentation

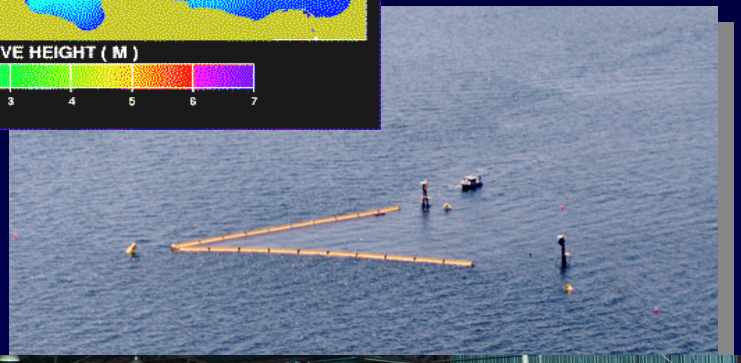
Coastal and Hydraulics Laboratory

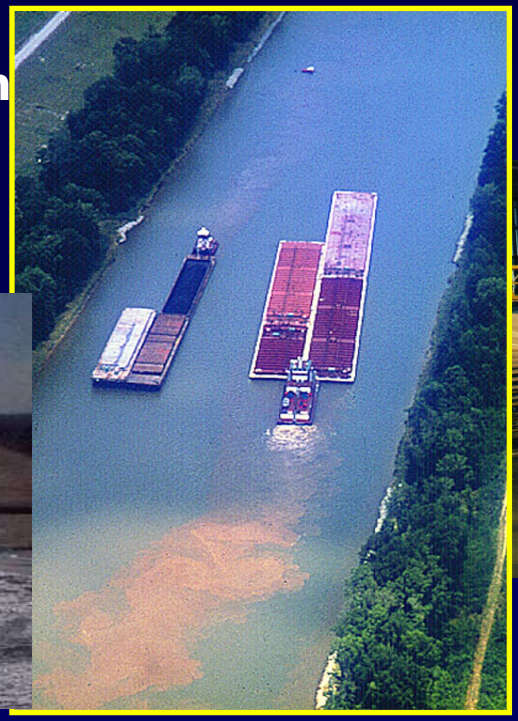
Physical Models



Numerical Models

Navigation

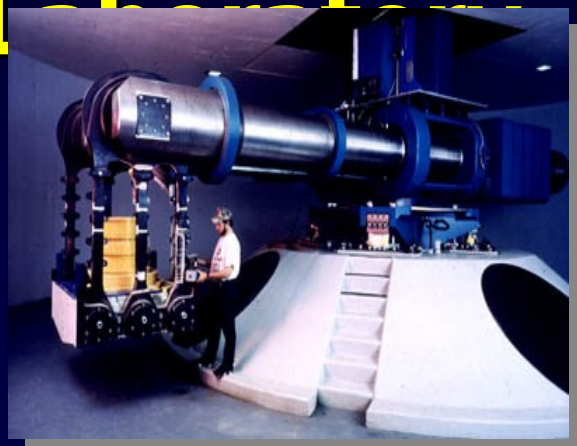




Flood Control

Sustainment Engineering

Geotechnical & Structures Laboratory

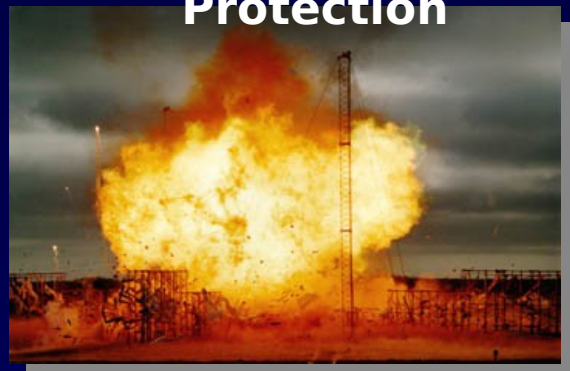


Centrifuge Research

Airfields and Pavements

Terrorist Threat Protection

Heavy Vehicle Simulator



Explosives Effects

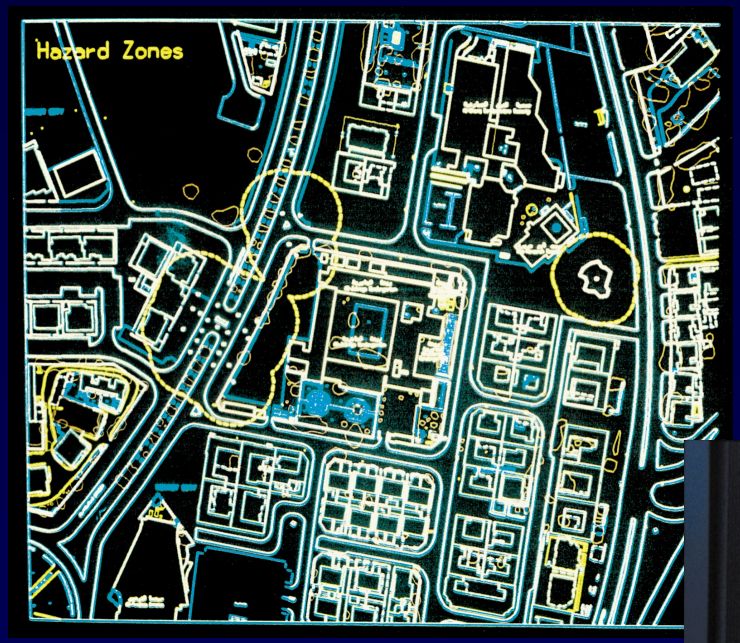
Mobility

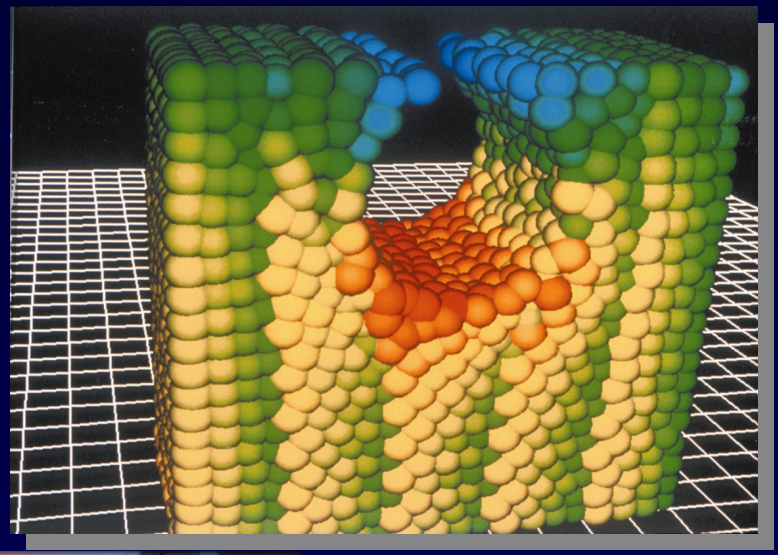
Survivability & Hard Target Defeat

Concrete

Information Technology Laboratory

CADD/GIS Technology





DoD High Performance Computing Center

Cold Regions Research and Engineering Laboratory

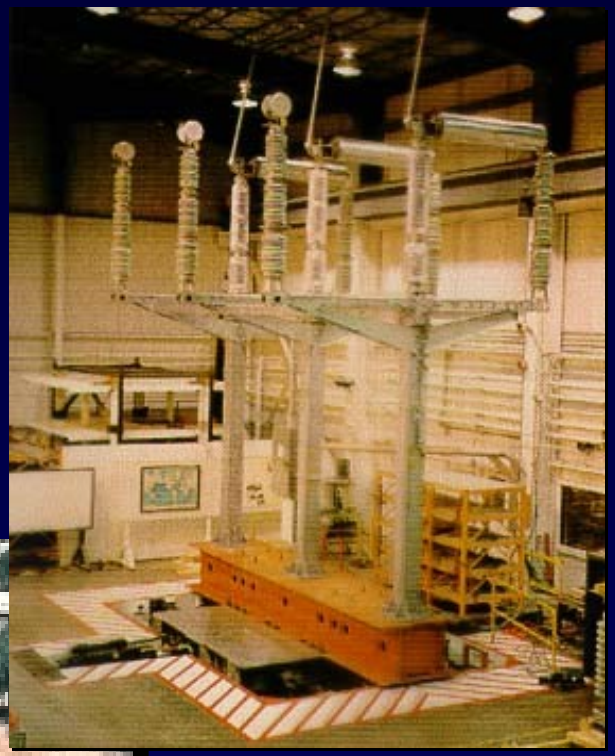
Ice Effects

Cold Weather Design Guidance

Frost Effects

Military Engineering

Construction Engineering Research Laboratory

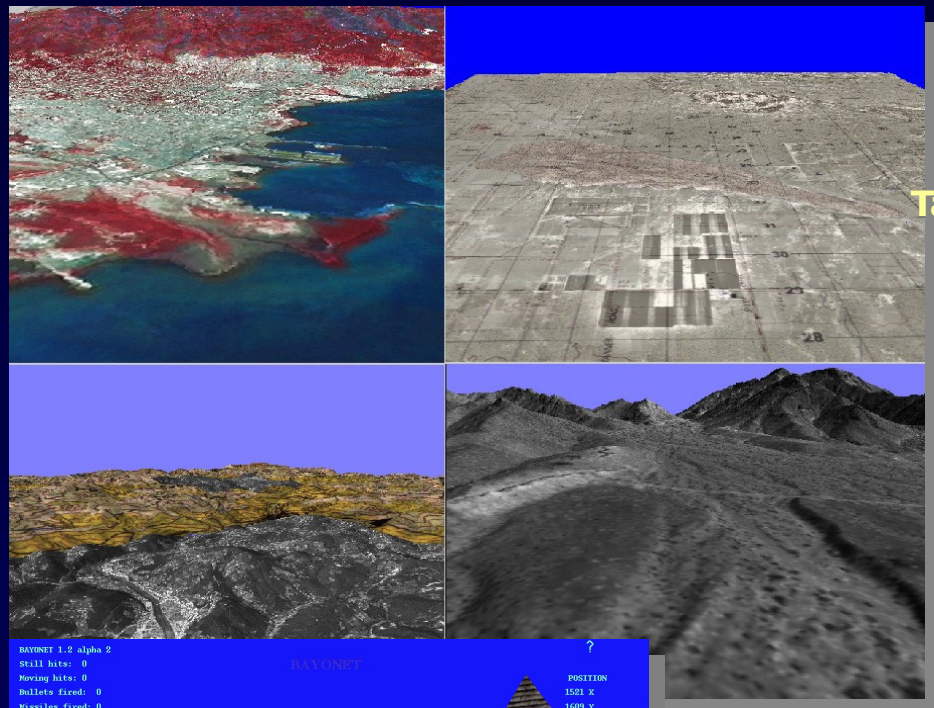


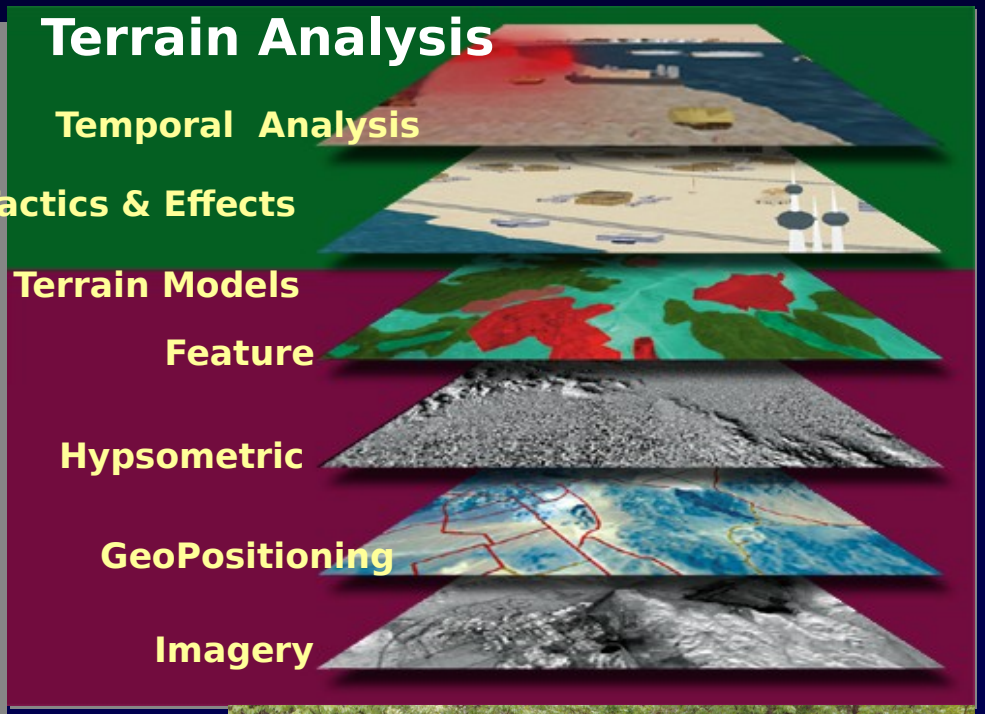
Installation Operations

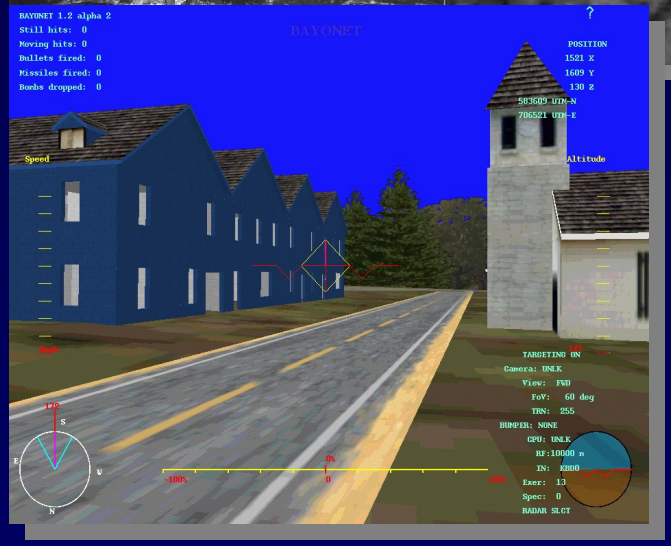
Facilities Acquisition and Revitalization

Military Land Management

Topographic Engineering Center







Terrain Generation, Reasoning & Visualization

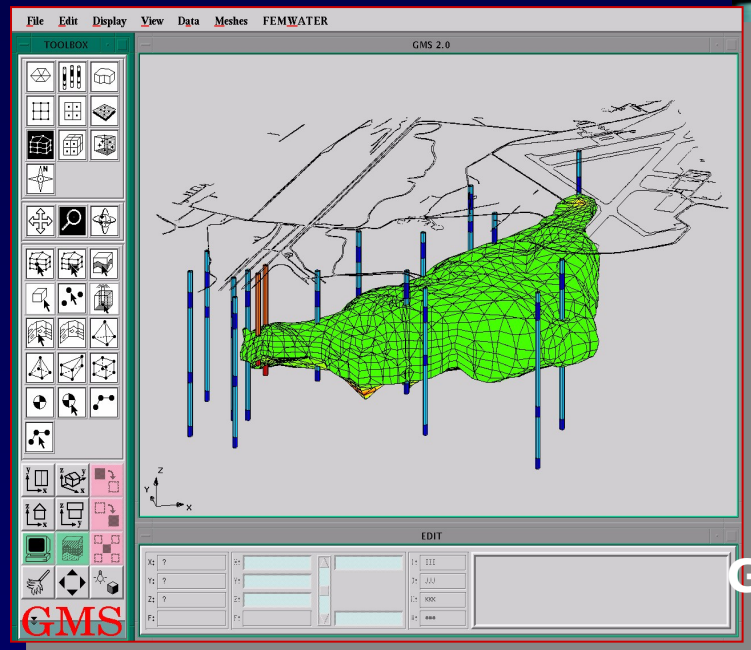
Combat Terrain Info Systems

Environmental Laboratory

UXO

Hazardous and Toxic Waste Research

Aquatic Habitat



Ground Water Modeling

Environmental Chemistry